



**FACTUAL REPORT OF INVESTIGATION
TESLA MODEL X COLLISION
VEHICAL AND SURVIVAL FACTORS FACTUAL REPORT**

Mountain View, CA

HWY18FH011

(14 pages)

**NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF HIGHWAY SAFETY
WASHINGTON, D.C.**

VEHICAL AND SURVIVAL FACTORS FACTUAL REPORT

A. CRASH INFORMATION

Location: Southbound US Highway 101 (US-101) south of North Shoreline Boulevard at the exit ramp transition to State Route 85 (SR-85), milepost 43.38, Mountain View, Santa Clara County, California

Vehicle #1: 2017 Tesla Model X

Vehicle #2: 2010 Mazda 3

Vehicle #3: 2017 Audi A4

Date: March 23, 2018

Time: Approximately 9:27 a.m. PDST

NTSB #: **HWY18FH011**

B. INVESTIGATIVE GROUP

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C. CRASH SUMMARY

For a summary of the crash, refer to the Crash Summary Report located in the docket for this investigation.

D. DETAILS OF THE INVESTIGATION

The vehicle and survival factors portion of the investigation included the collection of information pertaining to the vehicles involved and survival factors information, which included information about the vehicle occupants and injuries, and the emergency response. The driver information in this report includes only basic information about the driver and their injuries. Additional driver information is provided in the Human Performance Factors Group Chairman's Factual Report located in the docket for this investigation.

1. Vehicle Information

The vehicles were inspected on March 27 and 28, 2018 at Atlas Towing Services located at 24 S. Amphlett Blvd., San Mateo California. The Tesla had a more complete inspection that occurred on April 6, 2018, and is given in the Tesla Inspection Factual Report, located in the docket for this investigation.

1.1. 2017 Tesla Model X

The 2017 Tesla Model X had Vehicle Identification Number (VIN) 5YJXCAE28HFXXXXXX.¹ The Tesla struck an attenuating barrier at the highway off ramp, separating the car forward of the passenger compartment, damaging the primary battery, which ignited and caused a vehicle fire. A complete description of the vehicle is contained in the Tesla Inspection Factual Report, located in the docket for this investigation.

1.2. 2010 Mazda 3

The 2010 Mazda 3 had VIN JM1BL1SG9A1XXXXXX. The Mazda sustained damage on the left front. Figures 1 and 2 show a left front view and right front view of the Mazda, respectively. Figures 3 and 4 show a left rear and right rear view of the Mazda, respectively.



Figure 1: Left front view of the Mazda

¹ The last 6 digits of the VIN were replaced with X.



Figure 2: Right front view of the Mazda



Figure 3: Left rear view of the Mazda



Figure 4: Right rear view of the Mazda

1.3. 2017 Audi A4

The 2017 Audi A4 had VIN WAUENAF41HNXXXXXX. The Audi sustained minor damage at the right front and right rear. Figures 5 and 6 show a left front view and right front view of the Audi, respectively. Figures 7 and 8 show a left rear and right rear view of the Audi, respectively.



Figure 5: Left front view of the Audi



Figure 6: Right front view of the Audi



Figure 7: Left rear view of the Audi



Figure 8: Right rear view of the Audi

2. Occupant Information

Information about the vehicle occupants was obtained from the California Highway Patrol (CHP), the State of California Traffic Collision Report, and the Stanford Hospital medical records for the Tesla Driver.²

2.1. Tesla Driver

The Tesla driver was a 38-year-old male and was fatally injured in the crash. The driver was transported to Stanford Hospital, 300 Pasteur Dr., Stanford CA 94305 by a Rural Metro ambulance and arrived at 10:14 a.m. He arrived with Cardiac Pulmonary Resuscitation (CPR) in progress and had transfusion of blood being administered during transport. He was intubated upon arrival and was treated for cardiac arrest blunt trauma to the pelvis. Medical records indicated his weight as 176 pounds and did not record a height. The California Traffic Collision Report listed his height at 5 feet 11 inches and weight at 176 pounds. He was transferred to the operating room for treatment of an open book pelvic fracture and multiple internal injuries. Resuscitations were unsuccessful and the medical record listed the patient as expired at 1:30 p.m. on March 23, 2018.

2.2. Mazda Driver

The Mazda driver was a 25-year-old male sustained minor injuries and refused treatment at the scene. The State of California Traffic Collision Report listed his height at 5 feet 7 inches tall, and his weight as 108 pounds. The report also noted that he complained of lower back pain, but would see his own medical aid.

2.3. Audi Driver

The Audi driver was a 50-year-old female was not injured and refused treatment at the scene. The State of California Traffic Collision Report listed her height at 5 feet 4 inches tall, and his weight as 140 pounds.

3. Emergency Response Information

The survival factors investigation collected evidence related to survivability for the vehicles, the occupants, and the emergency response.

3.1. Law Enforcement Information

The California Highway Patrol (CHP) was dispatched to a traffic collision on March 23rd at 9:33:01 a.m.³ CHP officers arrived on scene at 9:46:37 a.m., had primary jurisdiction for this crash and assumed control of the scene upon arrival. CHP officers identified the driver and others involved. CHP conducted an on-scene investigation and coordinated the on-scene work with the Tesla. The vehicles were escorted by CHP officers during transport to the tow yard. CHP officers continued the investigation and inspection of the Tesla in the days following the crash. CHP was

² Attachment 1 - State of California Traffic Collision Report.

³ Attachment 2 – CHP Incident Detail Report.

notified of the Tesla reignition event at the tow yard that occurred on March 28th at approximately 7:06 p.m. CHP continued their investigation and coordinated with NTSB investigators.

3.2. Fire/Rescue Information

3.2.1. Mountain View Fire Department

On March 23rd at approximately 9:30:41 a.m., MVFD received a call reporting a motor vehicle accident with injuries and dispatched Battalion Chief 51 (B51), Engine 53 (E53), Engine 55 (E55), Rescue 51 (R51) and Truck 51 (T51). E55 arrived first on scene, established 101 Incident Commander (IC), and initiated fire attack using a 1.75” line with about 200 feet of hose and a Task Force Tip. Upon arrival on scene, B51 assumed IC. E53 and R51 were assigned to patient care. E55 Captain was assigned to survey the scene for additional involved and/or injured parties. T51 provided safety support for operating crews on scene. A third ALS, Engine 54 (E54) was requested and subsequently cancelled. E53 was released from the scene to follow the ambulance to Stanford Hospital to retrieve personnel and equipment. A combination of water and foam was used to extinguish the flames. It was estimated by a fire fighter on E55 that an average water flow rate of about 100 GPM was used for a couple minutes on the front and the same on the rear, for a total of about 200 or so gallons. After the flames were extinguished, there was occasional smoking and popping noises at which time additional water was applied. A summary of the response times is provided in Table 1. The dispatch log was obtained.⁴ MVFD created a National Fire Incident Report (NFIRS).⁵ MVFD also created a Safety Alert following the incident.⁶

Table 1: Summary of Mountain View FD Response

Unit	Unit Type	# Of Personnel	Dispatched	Enroute	Arrived	Cleared	Action Taken
B51	Battalion Chief	1	3/23/2018 9:31:23	3/23/2018 9:31:44	3/23/2018 9:36:23	3/23/2018 15:04:01	Incident Command
R51	Rescue	2	3/23/2018 9:31:23	3/23/2018 9:32:57	3/23/2018 9:40:00	3/23/2018 11:30:05	Patient Care
E53	Engine	3	3/23/2018 9:31:23	3/23/2018 9:34:50	3/23/2018 9:39:22	3/23/2018 13:54:58	Patient Care/Personnel and Equipment Recovery
E55	Engine	3	3/23/2018 9:31:23	3/23/2018 9:33:36	3/23/2018 9:37:19	3/23/2018 16:17:23	Suppression/Tow Yard
T51	Truck	3	3/23/2018 9:39:20	3/23/2018 9:39:37	3/23/2018 9:43:25	3/23/2018 10:33:40	Safety Support/Patient Care
E51	Engine	3	3/23/2018 11:04:21	3/23/2018 11:04:36	3/23/2018 11:11:33	3/23/2018 15:05:01	Suppression

Due to concerns regarding high voltage and energy issues, a “hot stick” high voltage detector was used to check the voltage. This did not work as they determined the hot stick was for alternating current (AC) not direct current (DC). The IC instructed crew to consider the vehicle energized and to stay away from the vehicle. The IC then contacted Tesla support regarding

⁴ Attachment 3 – Mountain View FD Background Event Chronology.

⁵ Attachment 4 – Mountain View FD NFIRS Report.

⁶ Attachment 5 – Mountain View FD Safety Alert.

additional actions to make the Tesla safe to approach and have removed from the scene. A Tesla Battery Engineer advised that the vehicle was not safe due to the extent of damage and that all personnel should stay away from the vehicle until it could be evaluated by Tesla representatives. In coordination with CHP, responders waited for Tesla engineers to arrive on scene due to concern for safety of loading and towing the vehicle.

During the response, a fire fighter on E55 slipped and injured himself leading to E55 being released from the scene by the IC. Engine 51 (E51) was requested to replace E55 due to the injury. About 2 or 3 hours into the call, responders heard a loud popping sound from under the vehicle but did not see any smoke or flames. At this time the replacement engine was enroute, but because there was no visible smoke or fire, responders would not have resumed firefighting operations. E51 arrived on scene, and T51 and R51 were released.

Approximately 5 hours into the event, Tesla engineers arrived and immediately began to remove damaged cells from the battery. At this time E55 returned to the scene to relieve E51. Soon into this effort, three consecutive popping sounds were heard, and a visible shift in the floor was observed. The Tesla engineers determined that further attempts to remove damaged battery parts was not safe. Because the Tesla could not be made completely stable on scene due to extensive damage, the decision was made to have the vehicle transported to Atlas Tow. After conducting electrical tests including voltage measurements, there was concern for electrical isolation.

The tow truck operator suggested wood blocks be used under the vehicle to ensure that it remained electrically isolated from the tow truck. Tesla engineers advised it would be better to keep the vehicle on a flat surface to avoid flexing the vehicle structure. Due to the metal tow truck bed, this was not an option, so the vehicle was put on wooden blocks. The Tesla was loaded onto the tow truck approximately 30 to 45 minutes after the popping sounds occurred. It was determined that the tow truck should have an escort to the tow yard, and E55 accompanied CHP and Tesla representatives to the tow yard in San Mateo. B51 terminated IC and all MVFD units cleared the scene leaving it with CHP. After safe delivery of the Tesla to Atlas Tow, at 4:17:23 p.m., E55 cleared the call and returned to the City of Mountain View.

3.2.2. San Mateo Fire Department

On March 23rd at approximately 4:39 p.m., Engine 24 (E24) was dispatched to Atlas Tow Yard regarding venting sounds from the involved Tesla. E24 arrived on scene at approximately 4:46 p.m. E24 was dispatched again later in the evening, at approximately 5:20 p.m., and arrived on scene at approximately 5:25 p.m. Crew monitored the vehicle with thermal cameras during both visits, however no fire suppression action was taken.

On March 28th at 7:01:29 p.m. San Mateo County was contacted regarding a fire at Atlas Tow yard. SMFD was dispatched to the tow yard at 7:04:29 p.m. and responded with units: Battalion Chief 5 (B5) and Engine 24 (E24). A Joint Incident Command was established with B5 and on scene CHP officers. The incident report was obtained.⁷ Upon arrival, the vehicle had smoke coming out from under the tarp placed over it and a line of attack was set up. The tarp was pulled off by a hook, and a small fire was located at the front passenger side, with flames about 8 to 12

⁷ Attachment 6 – San Mateo FD Incident Report.

inches was visible. The line had the capability of 90 GPM, and water was applied at various rates and times using the adjustable nozzle. After depleting the truck water capacity (500 gallons), a supply line was run from a fire hydrant. Approximately 600-700 gallons were applied over a period of 30-40 minutes total. The fire continued to burn and, after a consultation with Tesla by phone regarding electricity presence, foam use was approved by a Tesla engineer. Because the fire continued to burn, crew began applying water and foam. The foam was applied in a steady stream and took approximately 4-5 minutes to extinguish the fire. The fire was extinguished at approximately 8:50 p.m., and Hazmat 33 (HM33) responded to provide run-off testing and a Hazmat summary was obtained.⁸ A Tesla engineer arrived around this time and monitored the vehicle for additional smoke, but nothing occurred. HM33 determined the runoff to be toxic and ordered public works to vacuum the approximately 600 gallons of water, foam, and vehicle fluids from the storm drain. The scene was declared safe by HM33 crew at approximately 9:50 p.m.

3.2.3. Rural Metro EMS Information

Rural Metro EMS transported patients, with patient care conducted by Mountain View Fire Department responders from Engine 53 (E53) and Rescue 51 (R51). The Tesla driver was transported to Stanford Hospital at 10:13:39 a.m., with two MVFD Firefighter/Paramedics providing care along with the County Ambulance paramedic. A second ambulance arrived on scene and assisted with the assessment of the driver of the Audi, however the patient declined treatment and transport. The driver of the Mazda also declined treatment and transport.

4. Emergency Response Interviews

4.1. Interview with Tesla Engineers Who Responded to Scene

On Wednesday March 28, 2018 an interview of the two engineers who responded to the scene was conducted at the Tesla Palo Alto facility located at 3500 Deer Creek Road, Palo Alto, California, 94304.⁹

4.2. Doug Fournier, Off Duty Fire Captain, Redwood City Fire Department

The fire captain was interviewed by phone on March 28, 2018 by investigator Barth. He was asked to describe his training as a first responder. He said that he was a Captain on an engine unit at Redwood City FD, with about 20 years experience. He also has been a licensed paramedic since 1996, but that due to staffing methods at RFD, he does not serve as a paramedic in his position as a Captain. Instead he works on duty as a Captain/EMT 1. He was asked to describe what occurred that day. He said that he was driving home from work, on his regular route, when he noticed the traffic immediately slow for an accident that had occurred about a minute earlier. The traffic and not become backed up yet, and while he drove past the scene, he saw the Tesla on fire and a patient laying on the ground on the shoulder of the highway about 50 feet in front of the Tesla. He stopped his car and came upon 4 or 5 men that were on scene with a fire extinguisher, and were “worked up”. He approached the man on the side of the road and held his head to support the C-spine. While holding the patient, he spoke to the men on scene. They told

⁸ Attachment 7 – March 28, 2018 Tow Yard Incident Hazmat Summary.

⁹ Attachment 8 – Interview of Tesla Engineers.

him that they had pulled the driver out of the Tesla, while it was on fire, and put him on the side of the highway, on his side. They said that the driver was wearing his seatbelt and trapped in the car by his jacket, and so they removed his jacket and shirt to get him out. He was told that they used a hand held fire extinguisher on the fire, but it did not do much.

The fire captain said that the driver was unconscious, but breathing. He had a lot of blood coming out of his nose, and there was a pool of blood at his head. He performed a sternal rub to see if the patient would respond, but he was unresponsive. The fire captain looked back at the car while holding the patient, and saw that as the first Mountain View FD engine was arriving, the passenger compartment was fully engulfed in fire. The first engine attacked the fire, and soon after the second engine arrived. He described that the first engine applied water to the fire and it appeared that it quickly had a significant effect on the fire, reducing it by around 80%. The paramedic from the second engine approached, and he explained the condition of the patient. That paramedic didn't have any equipment, as he was conducting a rapid assessment of the scene. The paramedic then called for some trauma equipment. A paramedic returned and he transferred care to the paramedic. Soon after, the Battalion Chief arrived, and he told him that he believed that there was only the one critical patient at the scene. He then checked with the other paramedics and asked if there was anything else he could do. They said no, so he left the scene. He left before the EMS transport unit arrived.

He was asked about the Redwood city training for electric vehicles. He noted that they are quite proactive with this, and have had training in the form of power point presentations on electric vehicles, and training on high voltage cut points and other procedures. He noted that the fire fighters who work on ladder trucks are generally the most knowledgeable, as they conduct the rescue operations. He was asked if he has been on many scenes with electric vehicles, and responded that he's been on a handful. He did not recall any that involved fire. He was asked if there were any issues of stranded energy or high voltage. He said no, and that their typical concern was secondary deployment of airbag systems, and so they always disconnected the 12 volt system.

4.3. Greg Hayes, Fire Fighter, Engine 55, Mountain View FD

Fire Fighter (FF) Hayes was working as a FF/paramedic/hazmat specialist on engine 55 at Mountain View FD. They got a call for a vehicle fire on the freeway, and as they went over the shoreline overpass, they could see the smoke. They approached and blocked the number 1 and 2 lanes. As he was putting on his mask, he saw that the Tesla was fully involved in fire. They set up a 1.75 inch line with about 200 feet of hose and a Task Force Tip. This is an adjustable nozzle allowing a narrow stream up to a 45 degree spread. He started to apply water and could see arcing. He was able to quickly know it down where it did not have active flames at the front, and then moved to the rear and did the same. He said that about 30 seconds after they arrived, the second engine (E53) arrived, and attended to the patient.

He was asked to describe the fire fighting in more detail and said that they used a combination of water/foam. He was not sure of the foam percentage used. He had a max flow rate of about 165 GPM, but started and stopped, or varied the application as needed. He estimated that he was using an overall average flow rate of about 100 GPM, for a couple minutes on the front and the same on the rear, for a total of about 200 or so gallons. After getting out the flames, there was occasional smoking and popping noises, and when this occurred, he would apply more water. He monitored it like this for about 10 minutes and it seemed to be out. He said that it went out faster than a gasoline powered car because there was no fuel leaking and possibly because the vehicle was so exposed from the damage.

He saw some cables and was concerned about high voltage lines. They attempted to use a hot stick (an electricity measurement device about 3 feet long) to check the voltage. But it was for alternating current, not DC, so it did not work. The IC said that they should just consider the vehicle energized. He left before the Tesla engineer arrived. He noted that engine 51 remained on standby for the rest of the time onscene.

4.4. Mike McConnell, Tesla Engineer, assisted at Tow yard event on March 28th.

Investigator Barth spoke to Mr. McConnell by telephone on March 29th. He said that CHP called him and informed him of the re-ignition at the tow yard. He said he would come over, and arrived around 8:35 pm. When he arrived, the San Mateo FD had already completed their operations, which included putting water on the vehicle, then monitored it with a thermal camera, then applied water/foam, and then monitored it again with the camera. He arrived just after they finished applying water and foam, while the Hazmat unit was evaluating the runoff. He was not sure how much water they applied, but understood it was significantly more than that used on highway 101. The vehicle was not reacting at this time, and so they monitored the situation, looking for hot spots on the camera, or any activity with the vehicle. They remained there for a period of time, maybe around 2 hours, and then decided that it was stable, and he left.

He was asked why they used foam, and responded that they had called him earlier, and that he had told them foam would not pose a problem. He noted that he knows a fire fighter who had worked with flooded vehicles in Texas, and foam seemed to work pretty well. He said that they felt the foam assisted in keeping the surfaces wet and holds moisture. He was asked about the procedure of discharging the battery via salt bath, and responded that in a case like this, it would pose significant difficulty to remove the battery pack, which is required to do the procedure.

4.5. Battalion Chief Chuck Goodwin, San Mateo FD, Bat 5

Investigator Barth spoke to Bat. Chief 5, Chuck Goodwin on March 29th by telephone. He was asked about the event at the tow yard. He said that the SMFD is dispatched by San Mateo County and it does both the Belmont FD and the San Mateo FD. He said that he would look into providing the dispatch logs. He said there were 3 units that responded, which consisted of Engine

24, which is staffed by 3 FF, his Bat. Chief 5 unit, which is a pickup truck, and Hazmat unit 33 which is a van with a mobile lab from the San Mateo County Office of Environmental Health. He said that when he arrived the vehicle had smoke coming out from under the tarp and they set up a line to attack. The tarp was pulled off by a hook, and a small fire located at the front passenger side, with flames about 8 to 12 inches was visible. The line has the capability of 80 GPM, and they applied water at various rates and times using the adjustable nozzle. The truck holds 500 gallons, and as they were depleting the tank, they ran a supply line to a fire hydrant. He estimated that they applied about 600 to 700 gallons over a period of 30 to 40 minutes total.

He said that at first they were trying to be sparing with water, but the fire was not staying out. They applied water for some time, then switched to water and foam, and applied a more steady stream to make it go out. He was asked if he was focused on anything in particular, or if they were consciously trying to get it into the battery, and he said no, it was just being applied to where they saw smoke or flames. He was asked why they switched to foam. He responded that they first applied water and were cautious of electricity traveling up the stream and were starting and stopping the application. After consultation with Tesla by phone, they were told that foam would be OK and that electricity should not be a big risk. He said after they switched to foam and applied a steady stream, it took about 4 to 5 minutes to make it stop smoking. He said that hazmat came out and started doing tests on the run-off. They did not find anything remarkable beyond what would be expected for a towing yard and vehicle fire. He said the thermal camera was used and thinks that everything was about 60 degrees, except the tub of water and batteries which was slightly hotter, at about 70 degrees. He said that the Tesla engineer arrived after they had applied the foam. He said they remained on scene for a period of time and monitored the vehicle for additional smoke, but nothing occurred. They called the San Mateo PD and requested that an hourly patrol should drive by to check on things through the night.

4.6. Battalion Chief Zach Bond, Mountain View FD

Investigator Barth spoke to Chief Bond on March 30 by telephone. He asked him to describe the response. The Chief said that he arrived about a couple minutes after the initial engine, and that a rescue truck arrived with him, and then another engine not long after that. When he arrived, the first engine had started fire fighting operations on the Tesla. He said that approaching the scene, he could see a big column of smoke and that the vehicle was fully engulfed. He assumed role of IC and instructed paramedics from the other arriving units to attend to the driver of the Tesla. He discussed the decision by the first engine captain to attack the fire as the first priority. This decision was made as the burning Tesla was considered a safety risk and he knew that another unit with paramedics was arriving right behind them. The Bat. Chief agreed with the decision. The vehicle fire got reduced to only smoke very quickly and there was no visible flames within minutes of his arrival.

He coordinated the activities on scene and got people away from the Tesla. They were aware of the high voltage and energy issues with the Tesla, and a Captain commented that it

would be nice to speak to someone at Tesla to determine if the vehicle is safe for transport. He looked up Tesla's support line on his phone and started a process of calling Tesla, sending them some photos of the vehicle, and being transferred to different people. He was put in touch with engineers in the area that agreed to come and assist. He coordinated with CHP and they were in agreement that it would be safer to wait for the Tesla engineers, and that the CHP had other investigative duties, and although there was pressure, there was justification not to immediately open the freeway. Their was concern for safety of loading and towing the vehicle. During the response one of the fire fighters from an engine on scene slipped and injured himself – tweaked his back. They were waiting for the Tesla engineers, so he called for a replacement engine and released the one with the injured FF.

About 2 or 3 hours into the call, they heard a loud popping sound from under the vehicle, but did not see any smoke or flames. At this time the replacement engine was enroute, but he said that because there was no visible smoke or fire, they would not have resumed fire fighting operations. Approximately 5 hours into the event, the Tesla engineers arrived, and immediately began attempting to remove damaged cells from the battery. Soon into this effort, they hear 3 consecutive pops. He saw the floor of the Tesla visibly shift, and was surprised and concerned of the energy. The Tesla engineers quickly moved away from the vehicle and determined that further attempts to remove damaged battery parts was not safe. They conducted electrical tests, and depending on how parts were moved or flexed, they measured various voltages to the chassis of the Tesla. This raised concern for electrical isolation. At this point there was no further reason to leave the Tesla on scene, and they discussed arrangements for transport. The tow truck operator wanted to use wood blocks under the vehicle to ensure that it remained electrically isolated from the tow truck. The Tesla engineers said it would be better to keep the vehicle on a flat surface, to avoid flexing the vehicle structure. But as the bed of the tow truck was metal, this was not an option, so they put it on blocks.

They loaded the Tesla approximately 30 to 45 minutes after the 3 pops. The determined that the tow truck should have an escort to the tow yard. There is a considerable distance, but the fire truck supported this effort. He noted that on the freeway, the CHP has ultimate jurisdiction, so they have the say on when to transport a vehicle, even if the FD feels it should wait. It was fortunate in this case that everyone was in agreement. He wondered how it might work on city streets where the jurisdiction is different, and raised a concern that there are not clear protocols for when it would be safe to transport such a vehicle. He noted that he was the IC on the previous crash at this barrier. It was a drunk driver in a Prius. It was also a very severe crash. The driver self evacuated the vehicle and was laying on the roadway when they arrived. The driver lived. He noted that there were no similar concerns with the Prius because although it also was badly damaged, it had not caught fire. It was inspected and no issues with electrical isolation or batteries were identified on scene. He said that he has not been to many e-vehicle incidents, but they have had good training on cutting high voltage lines on these vehicles.

E. DOCKET MATERIAL

The following attachments and photographs are included in the docket for this investigation:

LIST OF ATTACHMENTS

Vehicle and Survival Factors Attachment 1 – State of California Traffic Collision Report
Vehicle and Survival Factors Attachment 2 – CHP Incident Detail Report
Vehicle and Survival Factors Attachment 3 – Mountain View FD Background Event Chronology
Vehicle and Survival Factors Attachment 4 – Mountain View FD NFIRS Report
Vehicle and Survival Factors Attachment 5 – Mountain View FD Safety Alert
Vehicle and Survival Factors Attachment 6 – San Mateo FD Incident Report
Vehicle and Survival Factors Attachment 7 – March 28, 2018 Tow Yard Incident Hazmat
Summary
Vehicle and Survival Factors Attachment 8 – Interview of Tesla Engineers

END OF REPORT